



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,796	10/06/2004	David R. Hall	66.0072	5795
38046 7590 04/06/2007 JEFFREY E. DALY INTELLISERV, INC 400 N. SAM HOUSTON PARKWAY EAST SUITE 900 HOUSTON, TX 77060			EXAMINER WONG, ALBERT KANG	
			ART UNIT 2612	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/711,796

Applicant(s)

HALL ET AL.

Examiner

Albert K. Wong

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 2612

1. This Office action is in response to the application filed October 6, 2004. Claims 1-23 are pending. This application is a CIP of 10/710,875 (patent 7,142,129), filed August 10, 2004. Since the claimed subject matter appears to be first disclosed in the instant application, the effective filing date for prior art purposes is considered to be the filing date of this application. If applicant disagrees with this finding, he is requested to point out support for the claims in the prior application.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, "the tool string" and "the drill string" lack an antecedent basis.

Regarding claims 20-21, "the at least one pressure sensor" lacks an antecedent basis.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 2612

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-13 and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wisler (7,170,423).

Regarding claim 13, the claimed the claimed segmented transmission path is show as the drill string (item 25) in Figure 2. The claimed sensor is shown in Figure 1a; the claimed receiver is shown as item 30. Wisler teaches in col. 4, lines 20-30 that the signals from the sensors are sent to a blow out preventer (BOP). A BOP is a device activated in response to measured conditions that an anomalous to prevent a blow out event. It would have been obvious to one of ordinary skill in the art that the detection of an anomalous condition downhole would result in an automated response at the BOP since the signal is sent to the BOP.

Regarding claim 15, it is conventional for pressure kicks, a blowout, and a loss of circulation to indicate a blowout condition. It would have been obvious to measure for such conditions to prevent a blowout.

Regarding claim 16, Wisler shows a blowout preventer acting as a receiver because it receives the signal from the sensors.

Regarding claim 17, Wisler shows a BOP. Such a device performs a blowout prevention action.

Regarding claim 18, it would have been obvious for a receiver to actuate the BOP since that is the function of the device. Otherwise, there would be no purpose for the receiver to receive the signal.

Regarding claim 19, see Figure 2 and location of BOP.

Regarding claim 20, Wisler teaches a bottom-hole assembly. It would have been obvious for the sensor to be a pressure sensor since such sensors are conventional in BHAs and are used to detect anomalous conditions.

Regarding claim 21, the sensor in Wisler is located near the bottom of the tool string.

Regarding claim 22, see item 51.

Regarding claim 23, one of ordinary skill in the art would be aware of the various types of BOPs. Wisler teaches the use of a BOP, but does not specify what kind. It would have been obvious to use one of the conventional BOPs for their known functions.

Regarding claims 1-6 and 8-12, these are the method equivalent of the apparatus claims. Since the apparatus has been shown to be obvious, the method of using the apparatus in its intended manner would also have been obvious.

Regarding claim 7, it would have been obvious to perform an automated response immediately since a delay may result in a blowout.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wisler as applied to claim 13 above, and further in view of Wei (6,753,791) and Boyle et al (2002/0193004).

Regarding claim 14, Wisler does not teach the use of inductive couplers in the EM transmission path. Wei teaches the use of a cable embedded into the pipe as a means for transmitting sensor signals, including pressure. Wei also shows a BOP. However, Wei does not

Art Unit: 2612

teach inductive couplers between the segments. Boyle teaches the use of inductive couplers in combination with a wired drill string. It would have been obvious to use a wired pipe since that is a well known alternative to using the drill string as a conduction medium. A wired pipe increases the distance a signal may be sent. Further, the use of inductive couplers is a solution for transmitting the signals across section of pipe. It would have been obvious to use a wired pipe with inductive couplers for the advantages taught in Wei and Boyle.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert K. Wong whose telephone number is 571-272-3057. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian A. Zimmerman can be reached on 571-272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Albert K. Wong

**ALBERT K. WONG
PRIMARY EXAMINER**

Application/Control Number: 10/711,796

Page 6

Art Unit: 2612

April 3, 2007